

## ABSTRACT

5 A gas-to-liquid (GTL) process and system for converting a natural gas) into liquid hydrocarbons (e.g. diesel, naphtha, distillates, etc.) wherein the equipment subsystems from existing gas-to-methanol plants are re-utilized in the (GTL) process. The syngas generator from the methanol plant is used to generate syngas in the present process. The syngas is then adjusted to remove CO<sub>2</sub> and H<sub>2</sub> before the syngas is passed through a Fischer-Tropsch (FT) reactor to convert the syngas to liquid hydrocarbons. The FT reactor is comprised of the 10 same equipment that was use previously to convert syngas into methanol except for the respective catalysts. The liquid hydrocarbons are then upgraded and separated into individual hydrocarbon products.